IN THE CLAIMS

1. (Currently Amended) A multilayered dielectric structure which comprises:

   ~~a)~~ a porous dielectric layer which has a porosity of about 10% or more;

   ~~b)~~ an adhesion promoting dielectric layer on the porous dielectric layer which has a porosity of about 10% or less; and

   ~~c)~~ a substantially nonporous capping layer on the adhesion promoting dielectric layer.

2. (Original) The structure of claim 1 wherein the porous dielectric layer is further disposed on a substrate.

3. (Original) The structure of claim 1 wherein the porous dielectric layer has a porosity of from about 10% to about 90%.

4. (Original) The structure of claim 1 wherein the porous dielectric layer has a dielectric constant of from about 1.3 to about 3.0.

5. (Original) The structure of claim 1 wherein the combination of the porous dielectric layer and the adhesion promoting dielectric layer has an effective dielectric constant of from about 1.4 to about 3.0.

6. (Original) The structure of claim 1 wherein the porous dielectric layer comprises a material selected from the group consisting of a nanoporous silica, silicon oxide, an organosilsesquioxane, a polysiloxane, a poly(arylene ether), a polyimide and combinations thereof.

7. (Currently Amended) The structure of claim 1 wherein the adhesion promoting dielectric layer has a porosity of from about 0.1% to about ~~13%~~ 10%.

8. (Original) The structure of claim 1 wherein the adhesion promoting dielectric layer has a dielectric constant of about 2.8 or more.

9. (Original) The structure of claim 1 wherein the adhesion promoting dielectric layer has a dielectric constant of from about 2.8 to about 4.0.

10. (Original) The structure of claim 1 wherein the adhesion promoting dielectric layer comprises a material selected from the group consisting of a nanoporous silica, silicon oxide, an organosilsesquioxane, a polysiloxane, a poly(arylene ether), a polyimide and combinations thereof.

11. (Original) The structure of claim 1 wherein the capping layer has a dielectric constant of from about 2.8 to about 7.0.

12. (Original) The structure of claim 1 wherein the capping layer comprises a material selected from the group consisting of silicon carbide, silicon oxide, silicon nitride, silicon oxynitride, tungsten, tungsten nitride, tantalum, tantalum nitride, titanium, titanium nitride, titanium zirconium nitride, and combinations thereof.

13. (Original) The structure of claim 1 wherein the ratio of the thickness of the adhesion promoting dielectric layer to the total thickness of the adhesion promoting dielectric layer and the porous dielectric layer ranges from about 0.02 to about 30.

14. (Original) The structure of claim 1 wherein the adhesion promoting dielectric layer, the porous dielectric layer, and the capping layer are adhered to one another to a degree sufficient to pass the ASTM D 3359-97 test.

15. (Original) A microelectronic device which comprises a substrate, a porous dielectric layer on the substrate, said porous dielectric layer having a porosity of about 10% or more; an adhesion promoting dielectric layer on the porous dielectric layer which has a porosity of about 10% or less; and a substantially nonporous capping layer on the adhesion promoting dielectric layer.

16. (Currently Amended) A method for forming a multilayered dielectric structure comprising:

~~a)~~ coating a substrate with a first composition comprising a pre-polymer, solvent, optional catalyst, and a porogen to form a film, cross-linking the composition to produce a gelled film, and heating the gelled film at a temperature and for a duration effective to remove substantially all of said porogen to produce a porous dielectric layer which has a porosity of about 10% or more;

~~b)~~ coating the porous dielectric layer with a second composition comprising a silicon containing pre-polymer, solvent, and optional catalyst; followed by cross-linking and heating to produce an adhesion promoting dielectric layer on the porous dielectric layer which has a porosity of about 10% or less; and

~~c)~~ forming a substantially nonporous capping layer on the adhesion promoting dielectric layer.

17. (Original) The method of claim 16 wherein the second composition is absent of a porogen.

18. (Original) The method of claim 16 wherein the first composition and the second composition comprises a metal-ion-free catalyst selected from the group consisting of onium compounds and nucleophiles.

19. (Original) The method of claim 16 wherein the first composition comprises a porogen which is selected from the group consisting of a polyalkylene oxide, a monoether of a polyalkylene oxide, filly end-capped polyalkylene oxides, Crown ethers, an aliphatic polyester, an acrylic polymer, an acetal polymer, a poly(caprolatactone), a poly(valeractone), a poly(methyl methacrylate), a poly(vinylbutyral) and combinations thereof.

20. (Original) The method of claim 16 wherein the first composition and the second composition comprises a silicon containing pre-polymer selected from the group consisting of an acetoxysilane, an ethoxysilane, a methoxysilane, and combinations thereof.

21. (Original) The method of 16 wherein the coating of the second composition onto the porous dielectric layer results in an infiltration of the second composition into the porous dielectric layer of about 300 angstroms or less.

22. (Original) The method of claim 16 wherein the first composition and the second composition comprises a silicon containing pre-polymer selected from the group consisting of tetraacetoxysilane, a C_1 to about C_6 alkyl or aryltriacetoxysilane, and combinations thereof.

23. (Original) The method of claim 22 wherein said triacetoxysilane is methyltriacetoxysilane.